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cont  
BB
- (ii) a second path is established between said endpoints over said physical layer wherein said first path corresponds to said second path; and
  - (iii) said establishment of the second path is performed as an integral part of said establishment of the first path.

### Remarks

#### Claim Rejections – 35 USC § 112

Claims 1 and 19 were rejected in view of the phrase “the first and second paths correspond”. In both these claims, this phrase has been amended to read “said first path corresponds to said second path . . .”. It is believed this deals with the aforementioned objection. The opportunity has also been taken to amend a typographical error in the word “claim” in claim 6 and correct the form of the claim.

#### Claim Rejections – 35 USC § 102

The present invention as explicitly recited in the independent claims is concerned at least in part with improving the speed of connection set up. This is achieved at least in part by establishing a path over a management layer of a network and a path between end points of a physical layer in the network in a single operation i.e. “establishing the second path is performed as an integral part of . . . establishing the first path”.

Claims 1, 16 and 19 are rejected under 35 U.S.C. §102 as being anticipated by Christie.

Christie is concerned with the problem of providing call-by-call switched circuits in ATM networks (as noted in the first paragraph under the heading "Background" in column 1). In particular it is noted that in prior art ATM networks cross connects cannot make connections on a call-by-call basis but rather on a permanent basis using permanent virtual circuits or permanent virtual paths.

The solution proposed by Christie is to provide a modified cross-connect which may be placed at the boundaries of the network and which may make use of pre-provisioned permanent virtual circuits that provide the appearance of a switched cross-connected network. In particular it is noted at column four lines 4-10, that Christie presents it as essential that the cross-connect system 150 has pre-provisioned virtual connections through the systems and that the exemplary virtual connection 181 represents one such "pre-provisioned" connection. Thus Christie explicitly teaches away from the integrated step of provisioning physical and management paths as explicitly recited in claims 1, 16 and 19. In essence therefore Christie discloses the prior art arrangement discussed at lines 11-13 of page 10 i.e. a network in which "the processes of choosing a suitable path and establishing a communication session over that path [are] carried out in series".

Accordingly, the teaching of Christie omits at least one of the elements recited in claims 1, 16 and 19 and therefore does not anticipate those claims. The rejection under Section 102 is therefore respectfully traversed.

Claim 6 is also allowable at least by virtue of its dependency.

Claims Rejections USC § 103

Claims 2-5, 17 and 18 are rejected under 35 U.S.C. §103 as being unpatentable over Christie in view of Chuah.

It is noted that Chuah merely discloses a technique for bundling a plurality of packets having a common destination and applying a label to ensure correct routing of the bundle. Quality of service features are also described.

However Chuah is not concerned with provisioning of paths but merely with the construction of data flowing along paths. Thus Chuah adds nothing to Christie to teach how to carry out provisioning over management or physical layers as an integral step.

For at least that reason, it is submitted that claims 2-5, 17 and 18 are non-obvious.

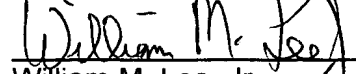
Claims 7 to 11 are rejected under 35 U.S.C. §103 as being unpatentable over Christie in view of Hsu. Hsu is merely concerned with choosing an optimal route through a network based on various "costing" parameters or "metrics". This is discussed in the context of MPLS and label switched paths. There is no disclosure of the interaction of the management layer with the physical layer and thus this document also does not teach how to carry out routing in the management or physical layers as an integral step.

Accordingly, and at least by virtue of their dependencies, the rejection of claims 7-11 is respectfully traversed.

It is gratefully noted that the Examiner has indicated that claims 12-15 contain allowable subject matter and will be allowable if re-written in independent form. However, given the above, it is submitted that the entire application is now in condition for allowance, and such action is solicited.

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Respectfully submitted,



William M. Lee, Jr.  
Registration No. 26,935  
Barnes & Thornburg  
P.O. Box 2786  
Chicago, Illinois 60690-2786  
(312) 368-6620  
(312) 368-0034 (fax)



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CLAIMS - VERSION WITH MARKINGS TO SHOW CHANGES MADE

2. (Amended) A method of establishing a connection between two endpoints in a communications network, said communications network comprising a management layer and a physical layer; said physical layer comprising said endpoints and a plurality of nodes interconnected by links and said management layer comprising a plurality of management nodes each management node being connected to a physical node; and wherein said method comprises the steps of:
  - (iii) establishing a first path over said management layer between two management nodes, one of said management nodes being connected to one of said endpoints and the other management node being connected to the other endpoint; and
  - (iv) establishing a second path between said endpoints over said physical layer wherein said first path [and second paths] corresponds to said second path; and wherein said step of establishing the second path is performed as an integral part of said step of establishing the first path.
6. (Amended) A method as claimed in claim 1 wherein said steps of establishing a first and a second path comprise[s] establishing a connection between two adjacent management nodes and then establishing a connection between the corresponding two physical nodes.
19. (Amended) A computer program stored on a computer readable medium said computer program being for controlling a communications network comprising at least two endpoints, a management layer and a physical layer, said physical layer comprising said endpoints and a plurality of nodes interconnected by links and said management layer comprising a plurality of management nodes each management node being connected to a physical node; said computer program being arranged to control said communications network such that:
  - (iv) a first path is established over said management layer between two management nodes, one of said management nodes being connected to one of said endpoints and the other management node being connected to the other endpoint;
  - (v) a second path is established between said endpoints over said physical layer wherein said first path [and second paths] corresponds to said second path; and
  - (vi) said establishment of the second path is performed as an integral part of said establishment of the first path.